

Application No. 09/633,002
Amendment dated November 13, 2003
Reply to Office Action dated June 17, 2003

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-10 (canceled).

Claim 11 (currently amended): A method for removing a deposited film inside a chamber which comprises:

providing a hot element in the chamber, said hot element disposed away from the deposited film, the hot element having at least a surface which comprises platinum;

exhausting said chamber;

heating the hot element to 400°C. or higher;

supplying into the chamber a cleaning gas containing at least one halogen-of-a-fluorine atom and a chlorine atom;

contacting the cleaning gas with the heated hot element to decompose and/or activate the cleaning gas and generate an activated species therefrom;

allowing the activated species to convert the deposited film into a gaseous substance; and removing the gaseous substance from the chamber.

Claim 12 (previously presented): The method according to claim 11, wherein said chamber comprises a CVD apparatus and the method further comprises:

heating the hot element;

supplying a material gas to the chamber;

contacting the material gas with the hot element to cause decomposition and/or activation of the material gas by said hot element; and

forming the deposited film which comprises at least one element from said material gas on a substrate.

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Claim 13 (previously presented): The method according to claim 11, wherein at least a part of a surface of an inner structure of said chamber is covered with platinum.

Claim 14 (previously presented): The method according to claim 12, wherein at least a part of the surface of an inner structure of said chamber is covered with platinum.

Claim 15 (previously presented): The method according to claim 11, wherein said cleaning gas is a gas containing at least one of fluorine (F_2), chlorine (Cl_2), nitrogen trifluoride (NF_3), carbon tetrafluoride (CF_4), hexafluoroethane (C_2F_6), octafluoropropane (C_3F_8), carbon tetrachloride (CCl_4), pentafluorochloroethane (C_2ClF_5), trifluorochlorine (ClF_3), trifluorochloromethane ($CClF_3$), and sulfur hexafluoride (SF_6), and mixtures thereof.

Claim 16 (previously presented): The method according to claim 12, wherein said cleaning gas is a gas containing at least one of fluorine (F_2), chlorine (Cl_2), nitrogen trifluoride (NF_3), carbon tetrafluoride (CF_4), hexafluoroethane (C_2F_6), octafluoropropane (C_3F_8), carbon tetrachloride (CCl_4), pentafluorochloroethane (C_2ClF_5), trifluorochlorine (ClF_3), trifluorochloromethane ($CClF_3$), sulfur hexafluoride (SF_6), and mixtures thereof.

Claims 17-20 (withdrawn).

Claims 21-26 (canceled)

Claim 27 (currently amended): A method for removing a deposited film from a wall inside a chamber, said method comprising:

providing a hot element, said hot element disposed away from said wall and said deposited film, said hot element having at least a surface which is composed of platinum;
heating said hot element to 400° C. or higher;

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supplying said chamber with a cleaning gas containing at least one halogen of a fluorine atom and a chlorine atom, and first contacting said hot element with said gas to thereby activate said gas;

thereafter contacting the deposited film with said activated cleaning gas and converting said deposited film into a gaseous substance; and

removing said gaseous substance from said chamber.

Claim 28 (previously presented): The method according to claim 27, wherein said chamber comprises a CVD apparatus and the method further comprises:

heating the hot element;

supplying a material gas to the chamber;

contacting the material gas with the hot element to cause decomposition and/or activation of the material gas by said hot element; and

forming the deposited film which comprises at least one element from said material gas on a substrate.

Claim 29 (previously presented): The method according to claim 27, wherein at least a part of a surface of an inner structure of said chamber is covered with platinum.

Claim 30 (previously presented): The method according to claim 28, wherein at least a part of the surface of an inner structure of said chamber is covered with platinum.

Claim 31 (previously presented): The method according to claim 27, wherein said cleaning gas is a gas containing at least one of fluorine (F_2), chlorine (Cl_2), nitrogen trifluoride (NF_3), carbon tetrafluoride (CF_4), hexafluoroethane (C_2F_6), octafluoropropane (C_3F_8), carbon tetrachloride (CCl_4), pentafluorochloroethane (C_2ClF_5), trifluorochlorine (ClF_3), trifluorochloromethane ($CClF_3$), and sulfur hexafluoride (SF_6), and mixtures thereof.

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Claim 32 (previously presented): The method according to claim 28, wherein said cleaning gas is a gas containing at least one of fluorine (F_2), chlorine (Cl_2), nitrogen trifluoride (NF_3), carbon tetrafluoride (CF_4), hexafluoroethane (C_2F_6), octafluoropropane (C_3F_8), carbon tetrachloride (CCl_4), pentafluorochloroethane (C_2ClF_5), trifluorochlorine (ClF_3), trifluorochloromethane ($CClF_3$), sulfur hexafluoride (SF_6), and mixtures thereof.